WHAT IS CLAIMED IS:

1. An on-vehicle electronic apparatus comprising:

a wireless communication unit which makes a wireless communication via a wireless LAN;

means for acquiring travel information from vehicles around a self vehicle using the wireless communication unit; and

means for taking a collision avoidance measure on the basis of the acquired travel information.

2. An apparatus according to claim 1, wherein the means for acquiring the travel information, comprises:

means for acquiring position information and velocity information each indicating positions and velocities of vehicles before and after the self vehicle using the wireless communication unit; and

means for calculating inter-vehicle distances between the self vehicle, and the vehicles before and after the self vehicle with reference to map information on the basis of the acquired position information and velocity information, and

the means for taking the collision avoidance measure takes the collision avoidance measure when the calculated inter-vehicle distances are not more than a predetermined distance, and the velocities of the self vehicle and the vehicles before and after the self vehicle are not less than a predetermined velocity.

3. An apparatus according to claim 2, wherein the

means for acquiring the position information and velocity information, comprises:

means for acquiring position information and velocity information of vehicles around the self vehicle using the wireless communication unit; and

means for selecting position information and velocity information of the vehicles before and after the self vehicle from the acquired position information and velocity information of the vehicles around the self vehicle on the basis of the map information.

4. An apparatus according to claim 2, wherein the means for calculating the inter-vehicle distances, comprises:

means for determining positions on a map on the basis of the acquired position information, and position information of the self vehicle; and

means for calculating the inter-vehicle distances on the basis of the determined positions on the map with reference to the map information.

5. An on-vehicle electronic apparatus comprising:

means for acquiring travel information of a travel group including a self vehicle; and

means for informing a driver of information of the travel group on the basis of the acquired travel information.

6. An apparatus according to claim 5, wherein the means for acquiring the travel information, comprises:

means for acquiring position information and velocity information each indicating positions and velocities of foremost and rearmost vehicles of the travel group including the self vehicle, and at least one vehicle which is included in the travel group and serves as a wireless transponder using a wireless LAN of vehicles included in the travel group;

means for calculating a length of the travel group using map information on the basis of the acquired position information indicating the positions of the foremost and rearmost vehicles;

means for calculating a distance from the foremost vehicle of the travel group to the self vehicle using the map information on the basis of the acquired position information of the foremost vehicle and the acquired position information of the self vehicle; and

means for calculating a time required until the self vehicle leaves the travel group, on the basis of the acquired velocity information of the respective vehicles and the calculated distance, and

the means for informing the information of the travel group informs the driver of the self vehicle of the calculated length of the travel group and the calculated time.

7. An apparatus according to claim 6, wherein the means for acquiring the position information and velocity information, comprises:

means for acquiring position information and velocity information of vehicles around the self vehicle;

means for selecting foremost and rearmost vehicles of a wireless area of the self vehicle with reference to the map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle;

means for outputting, to the selected vehicle, a command for acquiring position information and velocity information of the foremost and rearmost vehicles of the travel group including the self vehicle, and the at least one vehicle which is included in the travel group and serves as the wireless transponder; and

means for receiving the position information and velocity information of the foremost and rearmost vehicles of the travel group, and the at least one vehicle which is included in the travel group and serves as the wireless transponder in response to the command.

8. An apparatus according to claim 6, wherein the means for calculating the time, comprises:

means for calculating an average velocity of the velocities indicated by the acquired velocity information of the respective vehicles included in the travel group; and

means for calculating the time by dividing the

calculated distance by the average velocity.

9. An apparatus according to claim 7, further comprising:

means for acquiring position information and velocity information of vehicles around the self vehicle in response to the command from another on-vehicle electronic apparatus;

means for selecting a vehicle closest to a vehicle, which issued the command, with reference to the map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle; and

means for transmitting, to the selected vehicle, a packet which contains the acquired position information and velocity information of the vehicles around the self vehicle.

10. An apparatus according to claim 9, further comprising:

means for checking if the self vehicle is a foremost or rearmost vehicle of the travel group, after the packet is transmitted;

means for, when it is determined that the self vehicle is not the foremost or rearmost vehicle, acquiring the position information and velocity information of the vehicles around the self vehicle using the wireless LAN;

means for selecting a foremost or rearmost vehicle

of the wireless area of the self vehicle with reference to the map information on the basis of the position information and velocity information of the vehicles around the self vehicle; and

means for outputting, to the selected vehicle, a command for acquiring the position information and velocity information of the foremost and rearmost vehicles of the travel group including the self vehicle, and the at least one vehicle which is included in the travel group and serves as the wireless transponder.

11. An apparatus according to claim 9, further comprising:

means for receiving a packet which contains position information and velocity information of a transmission source from another on-vehicle electronic apparatus;

means for, when a transmission destination of the received packet is not the self vehicle, acquiring position information and velocity information of vehicles around the self vehicle;

means for selecting a vehicle closest to the transmission destination with reference to the map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle; and

means for transferring the received packet to the

selected vehicle.

12. An on-vehicle electronic apparatus comprising:

means for generating a packet which contains information indicating a transmission destination, and data to be transmitted; and

means for transmitting the generated packet to the transmission destination via a moving wireless LAN access point.

13. An on-vehicle electronic apparatus comprising:

means for receiving a packet which contains information indicating a position of a transmission destination and information to be transmitted to the transmission destination, from another on-vehicle electronic apparatus;

means for, when the packet is received, checking if connection with the transmission destination indicated by the information contained in the packet can be established using a wireless LAN;

means for, when the connection can be established, transmitting the information to be transmitted to the transmission destination, which is contained in the packet, to the transmission destination using the wireless LAN;

means for, when the connection cannot be established, acquiring position information and velocity information of vehicles around a self vehicle using the wireless LAN;

means for selecting a vehicle closest to the transmission destination with reference to map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle, and the information which is contained in the packet and indicates the position of the transmission destination; and

means for transmitting the packet to the selected vehicle using the wireless LAN.

14. An apparatus according to claim 13, further comprising means for transmitting a packet which contains information indicating a position of a transmission destination and information to be transmitted to the transmission destination.

15. An on-vehicle electronic apparatus which searches for a route to a destination, and issues an instruction to a driver in correspondence with a travel position, comprising:

means for acquiring route information of vehicles around a self vehicle using a wireless LAN;

means for estimating a traffic jam state on the basis of the acquired route information;

means for searching for another route on the basis of the traffic jam state; and

means for presenting the found route to the driver.

16. A collision avoidance method for an on-vehicle

electronic apparatus, comprising:

acquiring position information and velocity information each indicating positions and velocities of vehicles before and after a self vehicle using a wireless communication unit which makes a wireless communication via a wireless LAN;

calculating inter-vehicle distances between the self vehicle, and the vehicles before and after the self vehicle with reference to map information on the basis of the acquired position information and velocity information; and

taking a collision avoidance measure when the calculated inter-vehicle distances are not more than a predetermined distance, and the velocities of the self vehicle and the vehicles before and after the self vehicle are not less than a predetermined velocity.

17. A traffic jam information notification method for an on-vehicle electronic apparatus, comprising:

acquiring position information and velocity information each indicating positions and velocities of foremost and rearmost vehicles of a travel group including a self vehicle, and at least one vehicle which is included in the travel group and serves as a wireless transponder using a wireless LAN of vehicles included in the travel group;

calculating a length of the travel group using map information on the basis of the acquired position

information indicating the positions of the foremost and rearmost vehicles;

calculating a distance from the foremost vehicle of the travel group to the self vehicle using the map information on the basis of the acquired position information of the foremost vehicle and position information of the self vehicle;

calculating a time required until the self vehicle leaves the travel group, on the basis of the acquired velocity information of the respective vehicles and the calculated distance; and

notifying a driver of the self vehicle of the calculated length of the travel group and the calculated time.

18. An information transmission method for an on-vehicle electronic apparatus, comprising:

checking if a packet which contains information indicating a position of a transmission destination and information to be transmitted to the transmission destination is received from another on-vehicle electronic apparatus;

checking, when the packet is received, if connection with the transmission destination indicated by the information contained in the packet can be established using a wireless LAN;

transmitting, when the connection can be established, the information to be transmitted to the

transmission destination, which is contained in the packet, to the transmission destination using the wireless LAN;

acquiring, when the connection cannot be established, position information and velocity information of vehicles around a self vehicle using the wireless LAN;

selecting a vehicle closest to the transmission destination with reference to map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle, and the information which is contained in the packet and indicates the position of the transmission destination; and

transmitting the packet to the selected vehicle using the wireless LAN.

19. A route presentation method for an on-vehicle electronic apparatus, comprising:

acquiring route information from a plurality of vehicles around a self vehicle using a wireless LAN;

estimating a route which may be jammed on the basis of the route information acquired from the plurality of vehicles;

searching for, when the estimated route that may be jammed matches a part of a self route, another route which does not include the matched route; and

presenting the found route to a driver.